DOCUMENT RESUME

ED 393 091 CS 012 409

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TITLE Effect of Formal Study Skills Training on Sixth Grade Reading Achievement.
PUB DATE [96]
NOTE 7p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; Comparative Analysis; Grade 6; *Instructional Effectiveness; Intermediate Grades; Middle Schools; *Reading Achievement; Reading Research; Student Development; Student Improvement; *Study Skills
IDENTIFIERS Illinois (Chicago Suburbs); Illinois Goal Assessment Program

ABSTRACT

A study examined whether sixth grade students taught formal study skills would obtain significantly higher reading achievement than those not taught these skills. Study skills can be broken down into ten or more skill areas including: study habits, time management, test taking, lecture notetaking, reading comprehension, vocabulary, test anxiety, textbook reading, reading speed, and memory. Subjects of the study were 181 sixth-grade middle school students from a Chicago suburb. Of these, 79 students had participated in formal study skills training prior to the Illinois Goal Assessment Program (IGAP) test and 88 had not. From each of the 2 subgroups, 30 students were randomly selected. Results from the 1995 IGAP Reading Scores were used. A t-test ($p<.05$) for independent samples was done on these 2 sets of scores to determine if there was a statistically significant difference in reading between the 2 groups. Results revealed that the means for both groups were within 11 points. Results indicated that teaching students formal study skills had no visible effect on their academic achievement. These results contrast with earlier studies done by J. Fisher (1986). Further research is recommended at middle school and elementary grade levels. (A table of data is included; contains 13 references.) (CR)

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EFFECT OF FORMAL STUDY SKILLS TRAINING ON SIXTH GRADE READING ACHIEVEMENT

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ED 393 091

For the past 25 years there has been an increasing amount of concern that students are lacking in basic study skills. With the advances in our society, our students must also advance. Students are learning more information at an earlier age. The expectations are higher and yet seemingly the only formal guidance they are given is when they are in late middle school, secondary school or post-secondary education levels. While research at the middle and elementary grades is minimal, so is the formal study skills instruction. With data from other studies showing academic gains, directly related to same form of formal study skills training regardless of the size of the gain, schools can develop and implement formal individualized study skills programs to help their students.

For individuals to be successful in their academic and professional careers, they must possess basic skills of learning Since the 1970's educators have called for a "return to the basics." To most the basics are the 3R's - reading, writing and arithmetic, skills dealing mainly with communication and computation. More recently, Burkle (1989) suggests that many state Departments of Education and the College Board, have agreed that study skills should be included when speaking of the basic skills. The importance of study skills to student learning, and academic achievement and success, has increased dramatically since 1981 as teachers and administrators realize how essential this instruction is for their students. While research on formal study skills programs is minimal, identification and evaluation of particular skills is more prevalent.

Study skills can be broken down into ten or more skill areas. Those areas include but are not limited to: study habits, time management, test taking, lecture notetaking, reading comprehension, vocabulary, test anxiety, textbook reading, reading speed, and memory. It is felt by many that these are the skills that are at the heart of education. Formal study skills programs teach these skills as a separate content area in the curriculum. Learning strategies are procedures and processes that will help students develop particular study skills such as imagery for vocabulary and the SQ3R technique for textbook reading and comprehension. Due to the construct nature of these skills, they are also difficult to measure. Evaluation must then occur based on the frequency that a particular skill is used to determine a need for additional intervention. Three forms of evaluation can be used; 1) student questionnaire, 2) analysis of classroom work, and 3) analysis of test scores. The student questionnaire will determine need or non-need areas as related to study skills where as analysis of classroom work will show a transfer and usage of skills that in turn should effect the test scores in a positive manner. Reading achievement scores will be used from the 1995 Illinois Goal Assessment Program (IGAP) lists.

The issue that many teachers and administrators face is actually developing the perception that a need for study skills exists. In a study of student and faculty perceptions regarding study skills, Kallas (1992), found several areas that students and

CSC 12409

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teachers both agreed on and even larger areas where there was disagreement. In regards to student performance on tests, both groups agreed that students were more successful on multiple choice questions and had greater difficulty with fill in the blank questions. There also was agreement that students do not get enough sleep, record homework assignments or have a regular study time each day. Eleven Areas of disagreement range from time management and organization, to student responsibilities. Students were of the opinion that there is not a need for study skills training, where teachers have determined there is a need for skills intervention.

Lobay (1993), studied the correlation between binder skills and academic achievement at the middle school level and found no significant correlation for students in regular education classes. A positive correlation was identified for students with special needs. Overall the study showed that having the correct school supplies is directly relevant to student grades. Although Lobay (1993) defined having proper supplies in one place binder skills, it could be argued that organization is truly the skill the students have demonstrated that has effected their achievement.

Study skills are skills that must be practiced. Student textbooks have begun including these "skill units" as early as third grade: although teachers have begun a variety of skills training much earlier with their students. As the students progress, they are more capable of the higher order thinking processes. With this there is an increase in the expectations of parents, teachers, and administrators. The flaw is this is that as students do progress, they often fail to make the transfer of a particular skill (or many skills), to the content areas necessary. A study entitled "Learning Strategies in the School: What happens from theory to instructional practice?" conducted by Brown, (1992), clearly showed that regardless of the ability to discuss and determine the need for skills strategies, students were unable to implement their own procedures/strategies in the area necessary. As a possible result of this outcome, Brown (1992) alluded to the functions of learning strategies in the secondary school not as serving educational needs, but more political needs. In a contrasting study by McWhorter, (1993) obtained results that learning strategies had a positive influence on student post-secondary performance. The degree of increase in the performance varied among subject and difficulty. It was stated however, that the learning strategies underlying processes do not have a long term effect on student performance.

The Department of Health Education, and Welfare, Office of Education, recognized "ESEA Title II and The Right to Read" in their March 1972 No. 7, issue of Notable Reading Projects. These projects suggest that the formal reading instruction is the basis for education, not just for reading in elementary grades, but social studies, science, and other areas in the senior high school where subjects are taught by content areas, including study skills. The projects included developing reading skills but also incorporated other skills such as listening, questioning, analyzing and focusing. The research on formal study skills programs is far from extensive yet when looking at particular learning strategies themselves, there is a variety of information available. Wark (1986), conducted a study on imagery and study

skills. This study focused on how pictures and graphics in notes or text do improve learning performance. The academic subject that showed the highest gains was science. Wark (1986) observed that (picture) visual recall was far greater than words in both students and adults.

Learning Strategies such as the SQ3R method have been researched for over forty years. Fisher (1986) noted in her study "The SQ3R: A Classroom Model" that the critics don't often agree on the validity of certain studies, yet most would consider SQ3R an excellent system to follow for study. There are several elements that Fisher (1986) pointed out from one particular study that are necessary for the program to be effective. The program must be individualized, include sustained practice over a period of time, relate to student work, and students must see value in their efforts. These are important elements to consider in any program.

Assessment is not restricted to the United States. Each year France conducts academic assessments in various grades and subjects similar to the United States. Study skills have also become a concern in France as Grisay (1994) pointed out in her study "Effective and Less Effective Junior Schools in France: A Longitudinal Study on the School Environment Variables Influencing the Students Academic Achievement, Study Skills, and Socio-Affective Development. There are no formal evaluations of a variety of construct behaviors, study skills being one included. Out of each one hundred schools included in the survey, the eighty randomly selected students were administered pretests upon entering sixth grade, post-test at the end of seventh, and another test after four years of secondary school. While the girls' study skills scores seemingly increased, the boys did not. Overall results showed no increase in the study skills scores.

The limited research on formal study skills programs at the middle school level is not surprising. Although the movement for the past 25 years has progressed to skills training, there are few formal programs in operation. The programs that are currently functioning do not show any significant improvements in the achievement of their students. Those programs that link study skills to academic studies on a regular basis in conjunction with learning strategies have recorded successful gains. Due to the variance in results it is not possible to say conclusively that study skills will positively influence academic achievement. It is evident that there continues to be a need for study skills training. More research is needed at the lower elementary levels to identify skill areas as the need for intervention becomes evident. Therfore it is hypothesized that sixth grade students taught formal study skills will not obtain significantly higher reading achievement scores than those not taught formal study skills.

Procedures

Population/sample

The population of this study will include 181 sixth grade students from a middle class suburb of Chicago. From the 181 sixth grade students, 79 students participated in formal study skills prior to the IGAP test, 88 had not. Thirty students were randomly selected from each of the two subgroups. Each spring the Illinois Goals Assessment Program tests are administered to

Illinois district schools. Two samples were identified from school records of students who had received formal study skills training and those who had not. The reading results of the IGAP test administered during the 1994-1995 school year will be used in this study. The post-test only control group will be employed. The Illinois Goal Assessment Program (IGAP) Test (1995) average Reading Achievement Scale score for Illinois is 260. The comparison score band for the District and school is 264 to 296, with the average scale score being 280. The Illinois Board of Education evaluates each school by the total percentages of it's IGAP scores, not students, that fall into the three performance levels--does not meet meets or exceeds the states goals. The findings will be tabulated in terms of means and standard deviations. The t-test will be employed at the .05 level of confidence to determine if there is any statistically significant difference between the mean scores.

Findings of the Study

The samples for the study included sixth grade students from G. Kerstra Middle School. Each spring the students are administered the Illinois Assessment Program (IGAP) tests. From these sixth grade students two subpopulations were formed one group that had received formal study skills training and one group that had not received any formal training. Thirty students were randomly selected from each subpopulation. Results from the 1995 IGAP Reading Scores were used. A t-test ($p < .05$) for independent samples was done on these two sets of scores to determine if there is a statistically significant difference in reading scores of those students who have had formal study skills training and those who have not. Table 1 summarize the statistical analysis.

Table 1

Means Standard Deviations and t-tests for the Experimental Group and Control Group for Reading Achievement Scores

	Experimental	Control	t-score
M	294	305	45
SD	92	99	
N	30	30	

* Significant at .05 level.
P > .45
DF = 58

Table I indicates that formal study skills instruction did not have a statistical significant effect on IGAP reading scores. This data lead to the acceptance of the null hypothesis and the rejection of the research hypothesis that states sixth grade students taught formal study skills will obtain higher reading achievement scores than those not taught formal study skills.

Summary

The purpose of this study was to determine whether formal study skills training had an effect on reading achievement scores. Both the experimental and control group had a considerably large range of scores which explains the large deviations. Regardless of the deviations, the means for both groups were within eleven points. This data supports the null hypothesis in that there is no statistical difference in academic achievement scores between students who had formal study skills and those who had not.

Conclusions

The study shows that formal study skills training had no visible effect on students academic achievement. These findings contrast Fisher (1986) and her evaluation of Robinson's (1961) Effective Study where students were able to transfer study skills learned in a formal setting to academic classes. The review of literature showed both significant and insignificant findings in regards to study skills and academic achievement. The variety of results can be attributed to the differences in populations of the studies. Post-secondary populations tended to make a more successful transfer than secondary. In the middle school level, more directly relevant, the research is minimal at best regarding formal study skills training. Lobay (1993) concentrated on binder skills as related to academic achievement in the middle school and concluded that there is a correlation for students with special needs and binder skills, but no significant correlation could be found in regular education students.

Implications

The significance of this study shows the need for further research to be conducted at the middle school and elementary levels. It is at the levels where study skills begin to develop that needs to be examined more closely. In addition, what other variables can affect student achievement? Class size, parental involvement, gender, and self-concept, are variable that were not quantified here. When students are given guidance and direction early on their academic careers they can form a foundation of good study skills to base the rest of the education on instead of trying to undo old habits in the secondary and post secondary years.

Recommendations

Recommendations for further research.

1. Extended research at Elementary grade levels.
2. Extraneous variables need to be quantified as to what effect they have on study skills and academic achievement and to what extent.
3. Expand population to be included in the study.

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